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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,041	02/17/2004	Haifeng Wang	944-005.025	8368
4955 7590 06/19/2007 WARE FRESSOLA VAN DER SLUYS & ADOLPHSON, LLP BRADFORD GREEN, BUILDING 5 755 MAIN STREET, P O BOX 224 MONROE, CT 06468			EXAMINER DEPPE, BETSY LEE	
			ART UNIT 2611	PAPER NUMBER
			MAIL DATE 06/19/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/781,041

Applicant(s)

WANG ET AL.

Examiner

Betsy L. Deppe

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 5/19/04;8/25/05.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:
  - a. on page 10, line 13, "to" should be inserted after "prior";
  - b. on page 10, line 15, "intecell" should be "intercell";
  - c. on page 11, line 13, "into frequency domain (TD)" should be deleted to avoid redundancy with the language on line 14;
  - d. on page 11, line 17, "116" should be "160" in order to be consistent with Figure 3;
  - e. on page 11, line 24, "demodulated, rate-matched" should be "demodulated and rate-matched";
  - f. on page 12, line 24, "behind" should be "after";
  - g. on page 12, line 27, "singal is then, demodulated" should be "signal is then demodulated";
  - h. on page 12, the sentence on lines 28-31 is grammatically awkward; and
  - i. on page 13, line 2, "in" should be inserted after "shown."

Appropriate correction is required.

### *Claim Objections*

2. The claims are objected to because of the following informalities:
  - a. in claim 1, line 5, "the coded symbols in the time-domain for providing" should be "the time-domain coded symbols to provide";

- b. in claim 1, line 7, "for providing" should be "to provide";
- c. in claim 1, line 8, "guard interval" should be preceded by "the";
- d. in claim 2, line 5, "into time domain for providing" should be "into a time domain signal thereby providing" for improved readability;
- e. claim 2, lines 7-8, "for providing" should be "to provide";
- f. in claim 3, line 2, "time domain" should be preceded by "the";
- g. in claim 4, lines 1-2, "is guard interval removed and then" should be deleted since it is redundant to claim 2, line 2;
- h. in claim 6, line 2, "guard interval" should be preceded by "the";
- i. in claim 7, line 8, "for providing" should be "to provide" and "guard interval" should be preceded by "the";
- j. in claim 8, line 2, "a" should be inserted prior to "maximum";
- k. in claim 9, line 4, "symbols for" should be "symbols; means for";
- l. in claim 9, line 6, "a further signal for providing" should be "the further signal to provide";
- m. in claim 9, line 13, "for providing" should be "to";
- n. in claim 9, line 15, "for providing" should be "to provide";
- o. in claim 10, line 2, "the equalized" should be "then equalized";
- p. in claim 12, lines 4, 9, 11, 14-15, 18 and 22-23, "for providing" should be "to provide";
- q. in claim 12, line 12, "module" should be inserted after "fifth";

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- r. in claim 18, lines 7, 12, 14, 21, 24-25, and 29, "for providing" should be "to provide";
- s. in claim 18, line 12, "time domain" should be preceded by "a";
- t. in claim 18, line 15, "module" should be inserted after "fifth";
- u. in claim 18, line 31, "frequency domain" should be preceded by "a."

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what is meant by "inserting the signal stream by redundancy at a guard interval" in claim 1 line 7; claim 7, lines 7-8; claim 9, line 7; claim 12, line 10-11; and claim 18, lines 13-14. The dependent claims are rejected under same grounds as the claims from which they depend.

### ***Allowable Subject Matter***

5. Claims 1-20 would be allowable if rewritten or amended to overcome the claim objections and rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

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6. The following is a statement of reasons for the indication of allowable subject matter: prior art of record does not teach or suggests in combination a frequency division multiple access method or transmitter/system comprised of transforming coded symbols into symbols in the time domain, scrambling the symbols in the time domain and inserting guard intervals into the stream of scrambled time-domain symbols prior to transmission. Furthermore, prior art of record does not teach or suggests in combination a frequency division multiple access receiver with modules for (a) converting an equalized frequency domain signal to an equalized time domain signal, (b) descrambling the equalized time domain signal; and (c) converting the descrambled signal in the frequency domain.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references disclose OFDM communication systems: Matsumoto (US Pub. No. 2002/0172147 A1) and Kutagulla et al. (US Patent No. 7,184,714 B1).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betsy L. Deppe whose telephone number is (571) 272-3054. The examiner can normally be reached on Monday, Tuesday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Betsy L. Deppe  
Primary Examiner  
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